WHAT IS CLAIMED IS:

1.   A method for generating a price schedule, comprising:

generating a transition graph comprising a plurality of paths, each path comprising a plurality of states, each state having a price value, an inventory value, and a state value, the transition graph being generated by repeating the following for a plurality of stages until a final stage is reached:

determining the price value of a successor state;

calculating the inventory value of the successor state using the price value and the inventory value of a predecessor state; and

calculating the state value of the successor state using the price value and the inventory value of the predecessor state;

selecting an optimal path according to the state values of the states; and

determining a price schedule from the optimal path.

2.   The method of Claim 1, further comprising quantizing the inventory value of each successor state.

3.   The method of Claim 1, further comprising quantizing the price value of each successor state.

4.   The method of Claim 1, wherein selecting the optimal path according to the state values comprises:

determining a state at the final stage having an optimal state value; and

determining a path comprising a state of an initial stage and the state having the optimal state value.

5.   The method of Claim 1, further comprising eliminating a successor state in response to a constraint.

6. The method of Claim 1, further comprising:

computing an elasticity curve; and

computing the inventory value of each successor state using the elasticity curve.

7. The method of Claim 1, wherein:

each state has a certainty value; and

selecting the optimal path comprises determining a state at the final stage having a certainty value of a predetermined value.

8. The method of Claim 1, further comprising:

defining a plurality of locations;

estimating a demand forecast for the locations;

calculating an expected number of unrealized sales at each location;

adjusting the demand forecast in response to the expected number;

determining a sales forecast from the demand forecast; and

adjusting the inventory value of the successor state in response to the sales forecast.

9. A system for generating a price schedule, comprising:

a transition graph generator operable to generate a transition graph comprising a plurality of paths, each path comprising a plurality of states, each state having a price value, an inventory value, and a state value, the transition graph generator

5 operable to generate the transition graph by repeating the following for a plurality of stages until a final stage is reached:

determining the price value of a successor state;

calculating the inventory value of the successor state using the price value and the inventory value of a predecessor state; and

10 calculating the state value of the successor state using the price value and the inventory value of the predecessor state; and

an optimizer coupled to the transition graph generator and operable to:

select an optimal path according to the state values of the states; and

determine a price schedule from the optimal path.

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10. The system of Claim 9, wherein the transition graph generator is operable to quantize the inventory value of each successor state.

11. The system of Claim 9, wherein the transition graph generator is

20 operable to quantize the price value of each successor state.

12. The system of Claim 9, wherein the optimizer is operable to select the optimal path according to the state values by:

determining a state at the final stage having an optimal state value; and

25 determining a path comprising a state of an initial stage and the state having the optimal state value.

13. The system of Claim 9, wherein the transition graph generator is operable to eliminate a successor state in response to a constraint.

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14.   The system of Claim 9, further comprising an elasticity module coupled to the transition graph generator and operable to compute an elasticity curve, the transition graph generator operable to compute the inventory value of each successor state using the elasticity curve.

15.   The system of Claim 9, wherein:

each state has a certainty value; and

the optimizer is operable to select the optimal path by determining a state at the final stage having a certainty value of a predetermined value.

16.   The system of Claim 9, wherein the transition graph generator is operable to:

define a plurality of locations;

estimate a demand forecast for the locations;

calculate an expected number of unrealized sales at each location;

adjust the demand forecast in response to the expected number;

determine a sales forecast from the demand forecast;

and

adjust the inventory value of the successor state in response to the sales forecast.

17.   Logic for generating a price schedule, the logic encoded in media and when executed operable to:

generate a transition graph comprising a plurality of paths, each path comprising a plurality of states, each state having a price value, an inventory value, and a state value, the transition graph being generated by repeating the following for a plurality of stages until a final stage is reached:

determining the price value of a successor state;

calculating the inventory value of the successor state using the price value and the inventory value of a predecessor state; and

calculating the state value of the successor state using the price value and the inventory value of the predecessor state;

select an optimal path according to the state values of the states; and

determine a price schedule from the optimal path.

18.   The logic of Claim 17, further operable to quantize the inventory value of each successor state.

19.   The logic of Claim 17, further operable to quantize the price value of each successor state.

20.   The logic of Claim 17, further operable to select the optimal path according to the state values by:

determining a state at the final stage having an optimal state value; and

determining a path comprising a state of an initial stage and the state having the optimal state value.

21.   The logic of Claim 17, further operable to eliminate a successor state in response to a constraint.

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22.   The logic of Claim 17, further operable to:

compute an elasticity curve; and

compute the inventory value of each successor state using the elasticity curve.

5   23.   The logic of Claim 17, wherein:

each state has a certainty value; and

wherein the logic is further operable to select the optimal path by determining

a state at the final stage having a certainty value of a predetermined value.

10   24.   The logic of Claim 17, further operable to:

define a plurality of locations;

estimate a demand forecast for the locations;

calculate an expected number of unrealized sales at each location;

adjust the demand forecast in response to the expected number;

15   determine a sales forecast from the demand forecast;

and

adjust the inventory value of the successor state in response to the sales

forecast.

25.   A system for generating a price schedule, comprising:

means for generating a transition graph comprising a plurality of paths, each path comprising a plurality of states, each state having a price value, an inventory value, and a state value, the transition graph being generated by repeating the following for a plurality of stages until a final stage is reached:

determining the price value of a successor state;

calculating the inventory value of the successor state using the price value and the inventory value of a predecessor state; and

calculating the state value of the successor state using the price value and the inventory value of the predecessor state; and

means for selecting an optimal path according to the state values of the states and for determining a price schedule from the optimal path.

26.   A method for generating a price schedule, comprising:

generating a transition graph comprising a plurality of paths, each path comprising a plurality of states, each state having a price value, an inventory value, and a state value, the transition graph being generated by repeating the following for a plurality of stages until a final stage is reached:

computing an elasticity curve;

determining the price value of a successor state;

calculating the inventory value of the successor state using the elasticity curve, the price value, and the inventory value of a predecessor state;

adjusting the inventory value of the successor state by defining a plurality of locations, calculating an expected number of unrealized sales at each location, and adjusting the inventory value of the successor state in response to the expected number;

quantizing the inventory value and the price value of the successor state; and

calculating the state value of the successor state using the price value and the inventory value of the predecessor state;

selecting an optimal path according to the state values of the states by determining a state at the final stage having an optimal state value and determining a path comprising a state of an initial stage and the state having the optimal state value; and

determining a price schedule from the optimal path.

27.　　A method for computing an elasticity curve, comprising:

selecting a demand model having a plurality of variables;

receiving a plurality of values for each variable;

defining a plurality of filter sets, each filter set operable to restrict the values

5　　for at least one variable;

determining an elasticity curve for each filter set by:

filtering the values for at least one variable using the filter set; and

calculating the elasticity curve from the filtered values by performing a

regression analysis using the demand model as a regression equation;

10　　　　measuring a quality value for each elasticity curve; and

selecting an optimal elasticity curve according to the quality values.

28.　　The method of Claim 27, wherein the variables comprise:

a dependent variable comprising a demand variable; and

15　　a plurality of independent variables comprising a price variable and time

variables.

29.　　The method of Claim 27, wherein:

the variables comprise a dependent variable and a plurality of independent

20　　variables; and

determining the elasticity curve comprises using the demand model as a

regression equation of the dependent variable over the independent variables.

30.   The method of Claim 27, wherein:

the values are associated with a plurality of products; and

determining the elasticity curve for each filter set comprises:

determining an elasticity curve for each product using the values associated with the product;

measuring a quality value for each elasticity curve;

determining an unsatisfactory elasticity curve according to the quality values; and

eliminating the values associated with the unsatisfactory elasticity curve.

31.   The method of Claim 27, wherein:

the values are associated with a plurality of products; and

determining the elasticity curve for each filter set comprises:

determining an elasticity curve for each product using the values associated with the product;

calculating an elasticity value from each elasticity curve;

determining an unsatisfactory elasticity value; and

eliminating the values associated with the unsatisfactory elasticity value.

32.   The method of Claim 27, wherein the variables comprise an independent variable comprising a promotional variable.

33.   The method of Claim 27, wherein the variables comprise an independent variable comprising a seasonality index variable.

34.   A system for computing an elasticity curve, comprising:

a database operable to store a demand model having a plurality of variables, a plurality of values for each variable, and a plurality of filter sets, each filter set operable to restrict the values for at least one variable; and

5   a server coupled to the database and operable to:

determine an elasticity curve for each filter set by filtering the values for at least one variable using the filter set, and calculating the elasticity curve from the filtered values by performing a regression analysis using the demand model as a regression equation;

10   measure a quality value for each elasticity curve; and

select an optimal elasticity curve according to the quality values.

35.   The system of Claim 34, wherein the variables comprise:

a dependent variable comprising a demand variable; and

15   a plurality of independent variables comprising a price variable and a time variable.

36.   The system of Claim 34, wherein:

the variables comprise a dependent variable and a plurality of independent

20   variables; and

the server is operable to perform a regression analysis using the demand model as a regression equation of the dependent variable over the independent variables.

37.   The system of Claim 34, wherein:

the values are associated with a plurality of products; and

the server is operable to determine the elasticity curve for each filter set by:

determining an elasticity curve for each product using the values

5   associated with the product;

measuring a quality value for each elasticity curve;

determining an unsatisfactory elasticity curve according to the quality

values; and

eliminating the values associated with the unsatisfactory elasticity

10   curve.

38.   The system of Claim 34, wherein:

the values are associated with a plurality of products; and

the server is operable to determine the elasticity curve for each filter set by:

15   determining an elasticity curve for each product using the values

associated with the product;

calculating an elasticity value from each elasticity curve;

determining an unsatisfactory elasticity value; and

eliminating the values associated with the unsatisfactory elasticity

20   value.

39.   The system of Claim 34, wherein the variables comprise an
independent variable comprising a promotional variable.

25   40.   The system of Claim 34, wherein the variables comprise an
independent variable comprising a seasonality index variable.

41.   Logic for computing an elasticity curve, the logic encoded in media and when executed operable to:

select a demand model having a plurality of variables;

receive a plurality of values for each variable;

define a plurality of filter sets, each filter set operable to restrict the values for at least one variable;

determine an elasticity curve for each filter set by:

filtering the values for at least one variable using the filter set; and

calculating the elasticity curve from the filtered values by performing a regression analysis using the demand model as a regression equation;

measure a quality value for each elasticity curve; and

select an optimal elasticity curve according to the quality values.

42.   The logic of Claim 41, wherein the variables comprise:

a dependent variable comprising a demand variable; and

a plurality of independent variables comprising a price variable and a time variable.

43.   The logic of Claim 41, wherein:

the variables comprise a dependent variable and a plurality of independent variables; and

the logic is further operable to use the demand model as a regression equation of the dependent variable over the independent variables.

44.   The logic of Claim 41, wherein:

the values are associated with a plurality of products; and

the logic is further operable to determine the elasticity curve for each filter set by:

determining an elasticity curve for each product using the values associated with the product;

measuring a quality value for each elasticity curve;

determining an unsatisfactory elasticity curve according to the quality values; and

eliminating the values associated with the unsatisfactory elasticity curve.

45.   The logic of Claim 41, wherein:

the values are associated with a plurality of products; and

the logic is further operable to determine the elasticity curve for each filter set by:

determining an elasticity curve for each product using the values associated with the product;

calculating an elasticity value from each elasticity curve;

determining an unsatisfactory elasticity value; and

eliminating the values associated with the unsatisfactory elasticity value.

46.   The logic of Claim 41, wherein the variables comprise an independent variable comprising a promotional variable.

47.   The logic of Claim 41, wherein the variables comprise an independent variable comprising a seasonality index variable.

48.   A system for computing an elasticity curve, comprising:

means for selecting a demand model having a plurality of variables;

means for receiving a plurality of values for each variable;

means for defining a plurality of filter sets, each filter set operable to restrict

the values for at least one variable;

means for determining an elasticity curve for each filter set by:

filtering the values for at least one variable using the filter set; and

calculating the elasticity curve from the filtered values by performing a

regression analysis using the demand model as a regression equation;

means for measuring a quality value for each elasticity curve; and

means for selecting an optimal elasticity curve according to the quality values.

49.   A method for computing an elasticity curve, comprising:

selecting a demand model having a plurality of variables, the variables comprising a dependent variable comprising a demand variable, the variables comprising a plurality of independent variables comprising a price variable and a time variable;

receiving a plurality of values for each variable, the values associated with a plurality of products;

defining a plurality of filter sets, each filter set operable to restrict the values for at least one variable;

determining an elasticity curve for each filter set by:

filtering the values for at least one variable using the filter set; and

eliminating the values that are unsatisfactory by:

determining an elasticity curve for each product using the values associated with the product;

measuring a quality value for each elasticity curve;

determining an unsatisfactory elasticity curve according to the quality values; and

eliminating the values associated with the unsatisfactory elasticity curve; and

calculating the elasticity curve from the remaining values by performing a regression analysis using the demand model as a regression equation of the dependent variable over the independent variables;

measuring a quality value for each elasticity curve; and

selecting an optimal elasticity curve according to the quality values.

50.   A method for determining a sales forecast, comprising:

defining a plurality of locations;

estimating an inventory at each location;

estimating a demand at each location;

5   calculating an expected number of unrealized sales at each location using a difference between the demand at the location and the inventory at the location; and

determining a sales forecast in response to the expected number.

51.   The method of Claim 50, wherein:

10   estimating the inventory at each location comprises randomly populating the locations with a plurality of inventory units; and

estimating the demand at each location comprises randomly populating the locations with a plurality of demand units.

15   52.   The method of Claim 50, wherein:

estimating the inventory at each location comprises calculating a probability of each location receiving a number of inventory units according to a binomial distribution; and

estimating the demand at each location comprises calculating a probability of 20   each location receiving a number of demand units according to the binomial distribution.

53.   The method of Claim 50, wherein:

estimating the inventory at each location comprises calculating a probability of 25   each location receiving a number of inventory units according to an incomplete beta-function; and

estimating the demand at each location comprises calculating a probability of each location receiving a number of demand units according to the incomplete beta-function.

54.   A system for determining a sales forecast, comprising:

a database operable to store a plurality of definitions defining a plurality of locations; and

a server coupled to the database and operable to:

5   estimate an inventory at each location;

estimate a demand at each location;

calculate an expected number of unrealized sales at each location using a difference between the demand at the location and the inventory at the location; and

determine a sales forecast in response to the expected number.

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55.   The system of Claim 54, wherein the server is operable to:

estimate the inventory at each location by randomly populating the locations with a plurality of inventory units; and

estimate the demand at each location by randomly populating the locations 15   with a plurality of demand units.

56.   The system of Claim 54, wherein the server is operable to:

estimate the inventory at each location by calculating a probability of each location receiving a number of inventory units according to a binomial distribution; 20   and

estimate the demand at each location by calculating a probability of each location receiving a number of demand units according to the binomial distribution.

57.   The system of Claim 54, wherein the server is operable to:

25   estimate the inventory at each location by calculating a probability of each location receiving a number of inventory units according to an incomplete beta-function; and

estimate the demand at each location by calculating a probability of each location receiving a number of demand units according to the incomplete beta-30   function.

58. Logic for determining a sales forecast, the logic encoded in media and when executed operable to:

define a plurality of locations;

estimate an inventory at each location;

5 estimate a demand at each location;

calculate an expected number of unrealized sales at each location using a difference between the demand at the location and the inventory at the location; and

determine a sales forecast in response to the expected number.

10 59. The logic of Claim 58, further operable to:

estimate the inventory at each location by randomly populating the locations with a plurality of inventory units; and

estimate the demand at each location by randomly populating the locations with a plurality of demand units.

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60. The logic of Claim 58, further operable to:

estimate the inventory at each location by calculating a probability of each location receiving a number of inventory units according to a binomial distribution; and

estimate the demand at each location by calculating a probability of each
20 location receiving a number of demand units according to the binomial distribution.

61. The logic of Claim 58, further operable to:

estimate the inventory at each location by calculating a probability of each
25 location receiving a number of inventory units according to an incomplete beta-function; and

estimate the demand at each location by calculating a probability of each location receiving a number of demand units according to the incomplete beta-function.

62.   A system for determining a sales forecast, comprising:

means for defining a plurality of locations;

means for estimating an inventory at each location;

means for estimating a demand at each location;

5   means for calculating an expected number of unrealized sales at each location using a difference between the demand at the location and the inventory at the location; and

means for determining a sales forecast in response to the expected number.

63.   A method for determining a sales forecast, comprising:

defining a plurality of locations;

estimating the inventory at each location by calculating a probability of each location receiving a number of inventory units according to an incomplete beta-function;

estimating the demand at each location by calculating a probability of each location receiving a number of demand units according to the incomplete beta-function;

calculating an expected number of unrealized sales at each location using a difference between the demand at the location and the inventory at the location; and

determining a sales forecast in response to the expected number.

64.   A method for generating a price schedule, comprising:

generating a transition graph comprising a plurality of paths, each path comprising a plurality of states, each state having a plurality of values comprising a state value, the transition graph being generated by repeating the following for a plurality of stages until a final stage is reached;

calculating the values of a successor state using the values of a predecessor state; and

quantizing the values of each successor state;

selecting an optimal path according to the state values of the states; and

determining a price schedule from the optimal path.

65.   The method of Claim 64, wherein the values comprise a price value.

66.   The method of Claim 64, wherein the values comprise an inventory value.

67.   The method of Claim 64, wherein selecting the optimal path according to the state values comprises:

determining a state at the final stage having an optimal state value; and

determining a path comprising a state of an initial stage and the state having the optimal state value.

68.   The method of Claim 64, further comprising eliminating a successor state in response to a constraint.

69.   The method of Claim 64, further comprising:

computing an elasticity curve; and

computing an inventory value of each successor state using the elasticity curve.

70. The method of Claim 64, wherein:

each state has a certainty value; and

selecting the optimal path comprises determining a state at the final stage having a certainty value of a predetermined value.

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71. The method of Claim 64, further comprising:

defining a plurality of locations;

calculating an expected number of unrealized sales at each location; and

adjusting a value of the successor state in response to the expected number.

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